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WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE - SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

AS OF
FEB. 1, 1970

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES.

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P O Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



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WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

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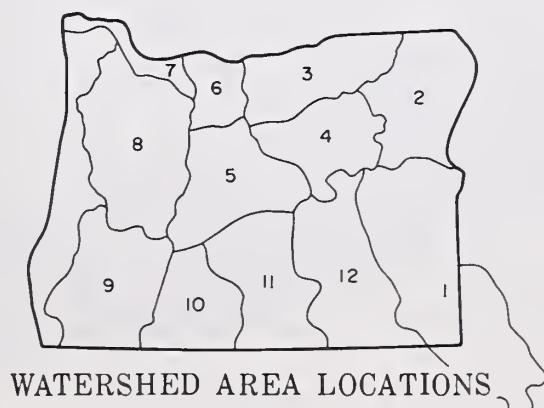
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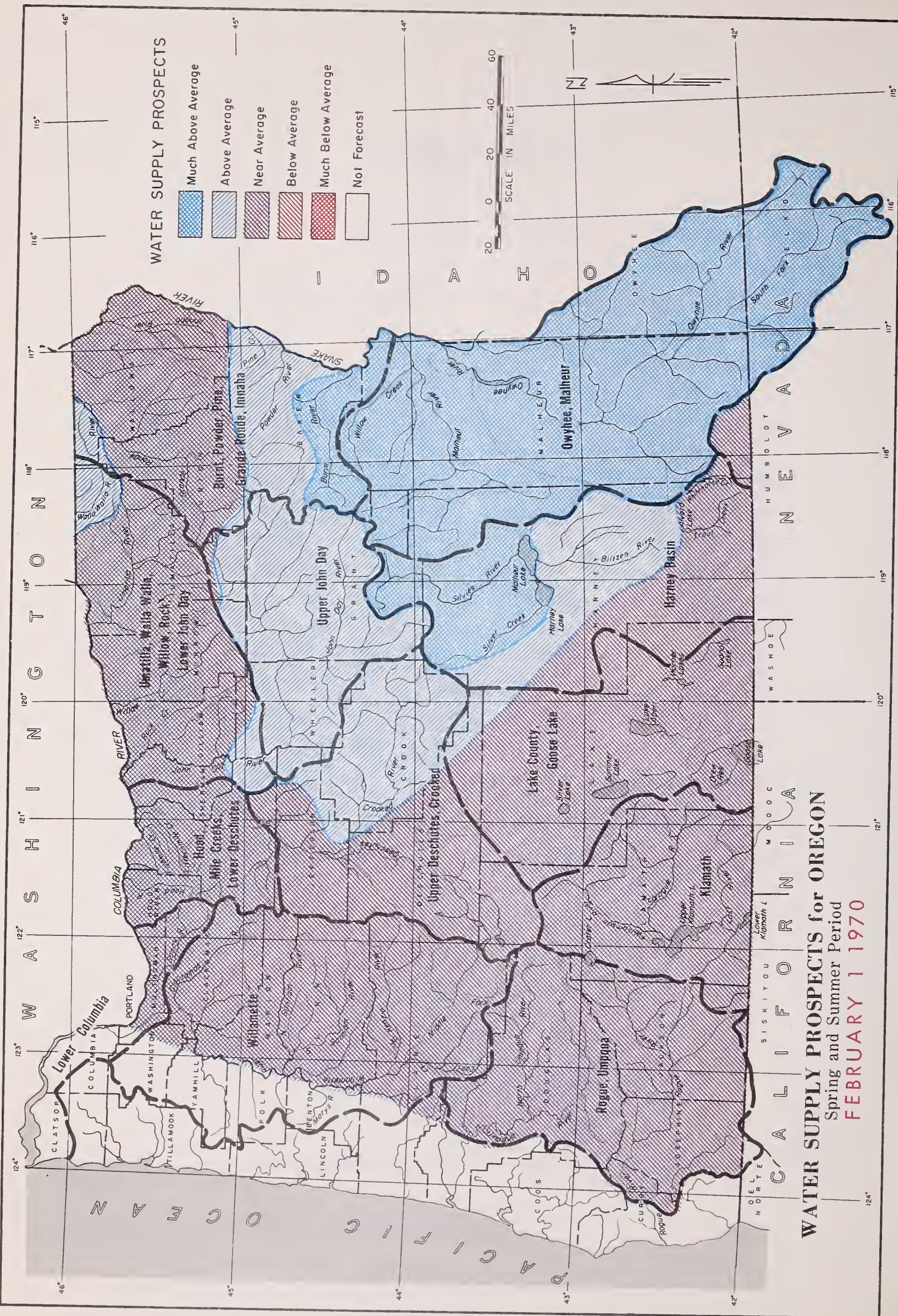
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WATER SUPPLY OUTLOOK for OREGON

FEBRUARY 1, 1970

Water supplies generally will be excellent in eastern Oregon and average along the Cascades and in the southcentral part of the state. January brought heavy rainfall to the state, filling many reservoirs and assuring most users a good supply of water next summer.

SNOW COVER

The warm temperatures and rainfall during the month depleted much of the low elevation snow. The higher elevation snowpack absorbed much of the rain, however, and is above average. The snow cover on watersheds that head at lower elevations is 50 to 75 per cent of average. The high country snowpack ranges from 100 to 160 per cent of normal.

PRECIPITATION

Rainfall in the Willamette Valley during January exceeded all time records at several stations. It was exceedingly heavy over the whole state, ranging from 180 to 270 per cent of average. Precipitation for the winter period, November through January, has been 115 to 160 per cent of normal.

SOIL MOISTURE

As a result of the heavy rains mountain soils are now saturated and most watersheds will show a good response from any ensuing precipitation.

RESERVOIR STORAGE

Oregon's stored water supplies are better than for several years. Twenty-six reservoirs are holding 2,016,000 acre feet. This is 118 per cent of average.

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STREAMFLOW

Streamflow was two to three times normal during January. Inflow to Owyhee Reservoir was 360 per cent of average. The Middle Fork of the Willamette produced an amount 200 per cent of average.

Prospective April-September streamflow for some representative streams are as follows:

<u>Stream</u>	<u>Forecast as % of 1953-67 Average</u>
Owyhee net Inflow	140
Malheur near Drewsey	167
Deschutes near Benham Falls	86
Grande Ronde near La Grande	92
Willamette, Mid. Fk. nr. Oakridge	93
Klamath Lake net Inflow	84
Rogue near Raygold	88
Silvies near Burns	166
John Day, Mid. Fk. near Ritter	155

This report contains data furnished by the Oregon State Engineer, U. S. Geological Survey, U. S. Weather Bureau and other cooperators.





WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

as of

FEBRUARY 1 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

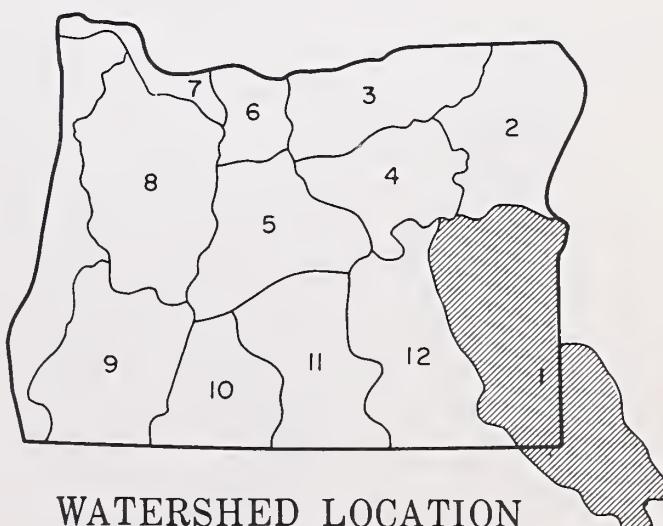
EXCELLENT WATER SUPPLIES ARE FORECAST FOR MALHEUR COUNTY THIS SUMMER. ABOVE NORMAL TEMPERATURES AND A JANUARY RAINFALL THAT WAS 267 PER CENT OF AVERAGE CAUSED HEAVY RUNOFF AT INTERMEDIATE AND LOWER ELEVATIONS. INFLOW TO Owyhee Reservoir was 3 1/2 TIMES THE AVERAGE AMOUNT. THE SNOWPACK IS NOW 160 PER CENT OF AVERAGE.

MOUNTAIN SOILS ARE SATURATED EXCEPT ON THE UPPER Owyhee in NEVADA WHERE THEY CONTAIN 75 PER CENT OF NORMAL MOISTURE. RESERVOIRS ARE STORING EXCELLENT AMOUNTS OF WATER FOR THIS TIME OF YEAR AND MOST WILL BE NEARING THEIR CAPACITY BY APRIL 1.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Boulder Creek	Excellent	Excellent
Bully Creek	Excellent	Excellent
Cow Creek	Excellent	Average
Jordan Creek	Excellent	Average
Jordan Valley Irrig. Dist.	Excellent	Average
McDermitt Creek	Average	Average
Oregon Canyon Creek	Average	Average
Owyhee Project	Excellent	Excellent
Succor Creek	Excellent	Average
Tenmile Creek	Average	Average
Vale-Oregon Irrig. Dist.	Excellent	Average
Warmsprings Irrig. Dist.	Excellent	Average
Willow Creek (Reservoired)	Excellent	Average



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Jordan Creek above Lone Tree Creek	134	158	April-July	b	85 ^m
Malheur near Drewsey	139	164	April-Sept.	b	85 ^m
Malheur, North Fork at Beulah ^d	180	162	Feb.-July	b	111
Owyhee Reservoir net Inflow ^k	120	167	April-Sept.	b	72
	116	153	Feb.-July	b	76
	100	167	April-Sept.	b	60
	600	137	Feb.-July	923	438
	420	140	April-Sept.	741	300

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Owyhee near Rome	1000	June 1	May 24
	250	July 1	June 20

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Agency Valley	60.0	32.6	14.2	23.3
Antelope	55.0	15.0	18.6	5.7
Bully Creek	30.0	24.2	10.9	14.5
Owyhee	715.0	608.0	306.8	359.3
Warmsprings	191.0	134.8	22.7	74.6

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Jordan Creek	1	89	95
Malheur River	2	92	100
Owyhee River	3	72	88

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Jordan Creek	4	69	165
Malheur River	5	117	163
Owyhee River	5	67	154

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of

FEBRUARY 1, 1970

**U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

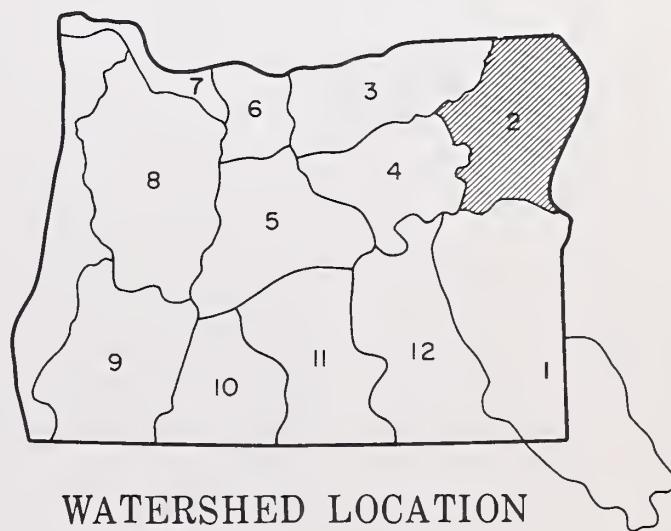
GENERAL OUTLOOK

EXCELLENT TO AVERAGE WATER SUPPLIES ARE FORECAST FOR NORTHEASTERN OREGON. JANUARY BROUGHT HEAVY PRECIPITATION AND SNOW TO THE AREA. RAINFALL WAS 216 PER CENT OF AVERAGE. THE SNOWPACK IS 120% TO 160% OF AVERAGE ON THE POWDER AND BURNT RIVERS. ON THE GRANDE RONDE WARM TEMPERATURES AND THE HEAVY RAINS DEPLETED MUCH OF THE SNOW COVER. HERE IT IS 1/2 OF NORMAL. SOILS ARE NOW SATURATED AND WATERSHEDS SHOULD SHOW A GOOD RESPONSE FROM ANY ADDITIONAL PRECIPITATION. RESERVOIRS, EXCEPT FOR WALLOWA LAKE, ARE STORING GOOD AMOUNTS FOR FEBRUARY 1.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Alder Slope	Excellent	Average
Baker Valley	Excellent	Average
Big Creek	Excellent	Average
Clover Cr. (nr. N. Powder)	Average	Average
Cove	Excellent	Average
Durkee	Excellent	Average
Eagle Valley	Excellent	Average
Elgin	Excellent	Average
Enterprise-Joseph	Average	Average
Hereford-Bridgeport	Excellent	Average
Imnaha River	Average	Average
LaGrande-Island City	Average	Average
Lostine-Wallowa	Average	Average
No. Powder River-Wolf Cr.	Excellent	Average
Pine Valley	Excellent	Average
Powder River-Elk Creek	Excellent	Average
Summerville	Average	Average
Sumpter Valley	Excellent	Average
Union-Hot Lake	Excellent	Average
Unity	Excellent	Average



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET Last Year	Average ⁱ
Bear near Wallowa	70	106	April-Sept.	b	66
Burnt near Hereford ^d	70	146	Feb.-July	b	48
	56	160	April-Sept.	b	35
Catherine near Union	79	123	April-Sept.	b	64
Eagle Creek abv. Skull Creek	228	136	April-July	b	168 ^m
	248	136	April-Sept.	b	182 ^m
Grande Ronde at La Grande	200	95	March-Sept.	262	211
	161	92	April-Sept.	227	175
Hurricane near Joseph	48	102	April-Sept.	b	47
Imnaha at Imnaha	345	106	April-Sept.	b	327
Lostine near Lostine	128	102	April-Sept.	b	125
Powder near Baker	81	135	April-July	b	60
	83	134	April-Sept.	b	62
Wallowa, East Fork near Joseph ^d	15.1	113	Feb.-Sept.	b	13.4
	12.1	101	April-Sept.	b	12.0

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Burnt, Powder	2	116	126
Grande Ronde, Catherine Cr., Imnaha R.	2	110	117

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Thief Valley	17.4	17.4	17.4	--
Unity	25.2	12.7	11.7	8.8
Wallowa Lake	37.5	12.2	27.0	21.6
Phillips Lake	73.5	31.1	10.6	--

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Grande Ronde River	4	45	55
Wallowa, Imnaha- Catherine Creek	6	96	119
Powder River	6	104	137
Burnt River	5	115	157

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

OREGON

as of

FEBRUARY 1, 1970

**U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

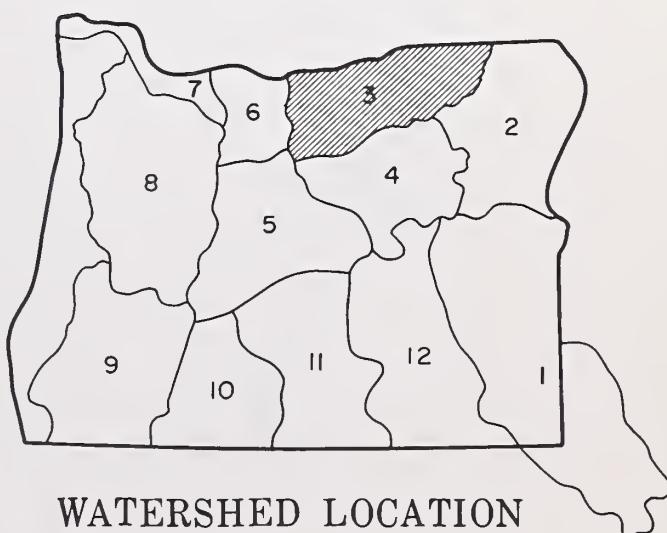
GENERAL OUTLOOK

NEAR AVERAGE WATER SUPPLIES ARE FORECAST FOR UMATILLA, MORROW AND GILLIAM COUNTIES. JANUARY STORMS BROUGHT WARM TEMPERATURES, AND PRECIPITATION WAS 216 PER CENT OF NORMAL. MUCH OF THE SNOW COVER HAS ALREADY MELTED AND WITH THE HEAVY RAINS CAUSED LOCAL STREAMS TO FLOW NEARLY 3 TIMES THEIR NORMAL JANUARY AMOUNTS. HOWEVER, SNOW REMAINS AT HIGHER ELEVATIONS AND IS NEAR AVERAGE. MCKAY RESERVOIR IS HOLDING TWICE ITS NORMAL CONTENTS FOR FEBRUARY 1 WHILE COLD SPRINGS CONTAINS AN AVERAGE AMOUNT. MOUNTAIN SOILS ARE SATURATED AND WATERSHEDS SHOULD SHOW A GOOD RESPONSE TO ANY ENSUING PRECIPITATION.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Walla Walla River, No. Fk.	Average	Average
Walla Walla River, So. Fk.	Average	Average
Walla Walla River, Main	Average	Average
Walla Walla River, Little	Average	Average
Couse Creek	Average	Average
Dry Creek	Average	Average
Pine Creek	Average	Average
Umatilla River, Main	Average	Average
Wildhorse Creek	Average	Average
Umatilla R. (Cold Springs Reservoir)	Average	Average
Umatilla River (McKay Res.)	Average	Average
McKay Creek	Average	Fair
Birch Creek	Average	Average
Butter Creek	Average	Average
Willow Creek	Average	Average
Rhea Creek	Average	Average
Rock Creek (John Day tributary)	Average	Average



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Butter Creek near Pine City	12.4	100	March-July	b	12.4
McKay near Pilot Rock	43	82	Feb.-July	b	51
	23	82	April-Sept.	b	28
Umatilla near Gibbon	100	101	March-Sept.	b	99
	81	101	April-Sept.	b	80
Umatilla at Pendleton	191	92	March-Sept.	285	208
Walla Walla, North Fork near Milton	25	125	March-Sept.	b	20
	18.0	112	April-Sept.	b	16.0
Walla Walla, South Fork near Milton	87	110	March-Sept.	b	79
	76	113	April-Sept.	b	67

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Umatilla, Walla Walla, McKay Creek	3	102	106

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Cold Springs	50.0	22.0	30.6	29.9
McKay	73.8	53.8	31.7	26.3

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
McKay Creek	3	28	69
Umatilla River	3	65	94
Walla Walla River	2	82	117

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of

FEBRUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

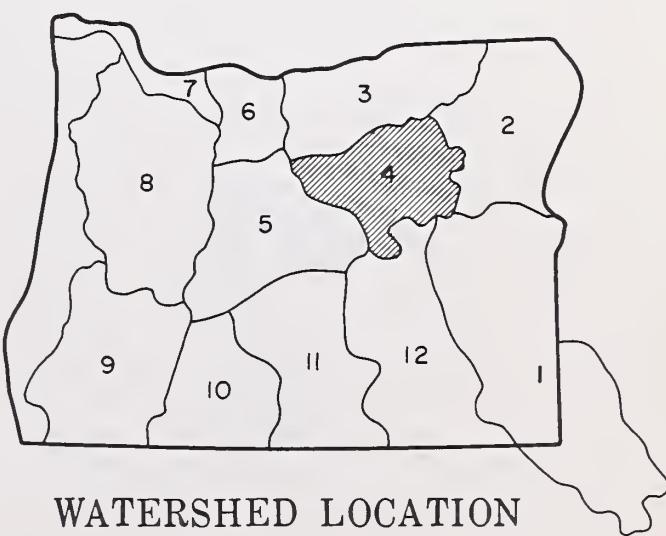
GENERAL OUTLOOK

EXCELLENT TO AVERAGE WATER SUPPLIES ARE FORECAST FOR THE UPPER JOHN DAY BASIN. THE MOUNTAIN SNOWPACK IS 130 TO 150 PER CENT OF AVERAGE AND WILL PRODUCE GOOD SUMMER STREAMFLOW. JANUARY BROUGHT PRECIPITATION 220 PER CENT OF AVERAGE. THIS RAINFALL AND WARM TEMPERATURES CAUSED STREAMS TO FLOW 3 TIMES THEIR NORMAL JANUARY AMOUNTS. SOILS ARE NOW SATURATED AND WATERSHED SHOULD SHOW A GOOD RESPONSE FROM ANY ENSUING PRECIPITATION.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Beech Creek	Excellent	Average
Beech Creek-Fox-Long Cr.	Excellent	Average
Bridge-Mountain Creeks	Average	Average
Camas Creek	Average	Average
Cherry Creek	Average	Average
Indian-Pine Creeks	Excellent	Average
John Day River, Main Fork	Excellent	Average
John Day River, Mid. Fork	Excellent	Average
John Day River, N. Fork	Excellent	Average
John Day River, S. Fork	Excellent	Average
Monument-Kimberly	Excellent	Average
Strawberry Creek	Excellent	Average



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
John Day at Prairie City	66	130	March-July	b	51
	59	128	April-Sept.	b	46
John Day, Middle Fork at Ritter	175	130	March-July	b	135
	152	131	April-Sept.	b	116
Strawberry near Prairie City	9.9	125	March-July	b	7.9
	10.9	130	April-Sept.	b	8.4

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average m
John Day abv. Dayville	6	104	116
John Day, North Fork	2	96	108

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average i
John Day River, No. Fk.	6	98	128
John Day abv. Dayville	5	113	152

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of

FEBRUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

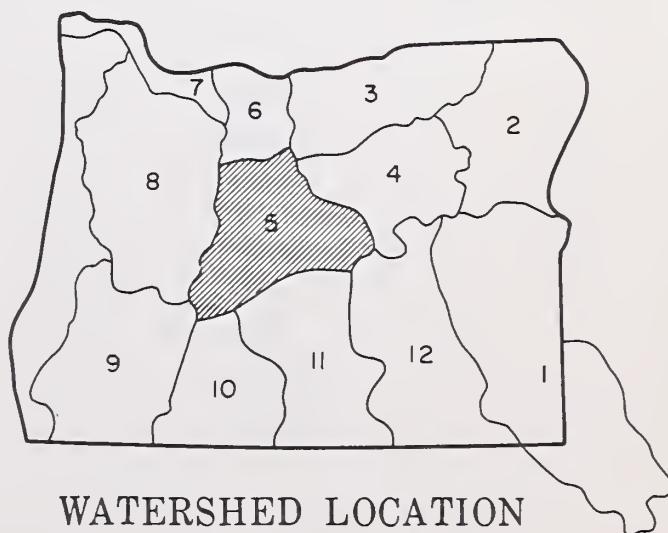
GENERAL OUTLOOK

NEAR AVERAGE WATER SUPPLIES ARE FORECAST ALONG THE UPPER DESCHUTES AND CROOKED RIVER THIS SUMMER. JANUARY STORMS BROUGHT GENEROUS AMOUNTS OF RAINFALL AND SNOW. RESERVOIRS ALONG THE CROOKED RIVER RECEIVED GOOD INFLOW DURING THE MONTH AND WILL FILL. THOSE ON THE UPPER DESCHUTES ARE NEARING AVERAGE AMOUNTS FOR FEBRUARY 1. THE MOUNTAIN SNOWPACK IS NEAR AVERAGE FOR THIS TIME OF YEAR. MOUNTAIN SOILS, ESPECIALLY ON THE CROOKED RIVER, ARE WETTER THAN NORMAL FROM THE JANUARY RAINS.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Arnold Irrigation District	Average	Average
Bear Creek	Average	Average
Beaver Creek	Average	Average
Camp Creek	Average	Average
Central Ore. Irrig. Dist.	Average	Average
Crooked River	Average	Average
Deschutes River	Average	Average
Hay-Trout Creeks	Average	Average
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Average	Average
North Unit Irrig. Dist.	Average	Average
Ochoco Creek	Average	Average
Sisters Irrigation Dist.	Average	Average
Snow Creek Irrigation Dist.	Average	Average
Squaw Creek Irrig. Dist.	Average	Average
Swalley Ditch	Excellent	Excellent
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Average	Average



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Crane Prairie Reservoir total Inflow Crescent at Crescent Lake ^d	118	94	April-Sept.	b	126
	26	100	March-July	b	26
	29	103	April-Sept.	b	28
Crooked near Post	229	132	Feb.-July	b	173
	124	123	April-Sept.	b	101
Deschutes at Benham Falls ^d	338	86	April-July	336	393
	510	86	April-Sept.	514	596
Deschutes below Snow Creek	85	108	Feb.-Sept.	64	79
	70	106	April-Sept.	55	66
Deschutes, Little near Lapine ^d	112	99	Feb.-July	95	113
	96	101	April-Sept.	84	95
Ochoco Reservoir net Inflow	45	118	Feb.-July	b	38
	28	122	April-Sept.	b	23
Odell near Crescent	29	97	April-Sept.	27	30
Squaw near Sisters	52	102	April-Sept.	52	51
Tumalo near Bend ^d	49	100	April-Sept.	49	

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Deschutes at Bend		Forecast to be issued April 1.	
Little Deschutes near La Pine	400 200	June 8 July 4	June 7 July 8

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Crane Prairie	55.3	41.4	30.9	44.4
Crescent Lake	86.9	39.2	29.8	47.3
Ochoco	47.5	33.7	6.5	22.2
Prineville	153.0	137.5	93.2	100.7
Wickiup	200.0	140.8	113.6	160.8

SOIL MOISTURE

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:		RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average ^m			Last Year	Average ⁱ
Crooked R., Upper Deschutes River	2	103	112	Crooked, Ochoco	3	84	114
				Deschutes abv. Wickiup	3	70	96
				Little Deschutes	3	55	92
				Tumalo & Squaw Creeks	3	74	85

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

as of

FEBRUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

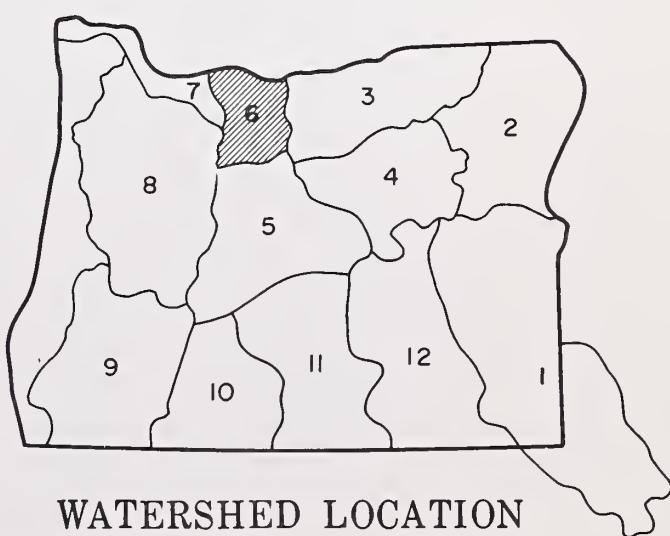
GENERAL OUTLOOK

THE PROSPECT IS FOR AVERAGE WATER SUPPLIES IN THE HOOD RIVER-LOWER DESCHUTES WATERSHEDS FOR THIS SPRING AND SUMMER. THE MOUNTAIN SNOWPACK IS NEAR AVERAGE. PRECIPITATION DURING JANUARY WAS 196 PER CENT OF AVERAGE, WHICH PRODUCED HEAVY STREAMFLOW. WATERSHED SOILS ARE AT THEIR WATER-HOLDING CAPACITY. CLEAR LAKE RESERVOIR WAS ABOUT HALF FULL JANUARY 31.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Aldridge Ditch (Tony Creek)	Average	Average
Badger Creek	Average	Average
Dee Irrigation District	Average	Average
East Fork Irrig. Dist.	Average	Average
Farmers Irrigation Dist.	Average	Average
Hood River Irrig. Dist.	Average	Average
Juniper Flat	Average	Average
Middle Fork Irrig. Dist.	Average	Average
Mile Creeks	Average	Average
Mill Creek	Average	Average
Mount Hood Irrig. Dist.	Average	Average
Rock-Gate-Threemile Creeks	Average	Average
Tygh Creek	Average	Average
White River	Average	Average



WATERSHED LOCATION

Report prepared by

T.A. GEORGE AND H.M. VANCE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Hood River near Hood River ^d	271	96	April-July	b	282
	324	96	April-Sept.	b	336
Hood, West Fork near Dee	136	97	April-July	b	140
	154	96	April-Sept.	b	161
White below Tygh Valley	130	102	April-July	b	128
	146	101	April-Sept.	b	144

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^m
Hood River, Mile Creeks	1	99	--

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Clear Lake (Wasco)	11.9	5.6	b	2.6

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Hood River White River	6 3	43 46	100 96

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of

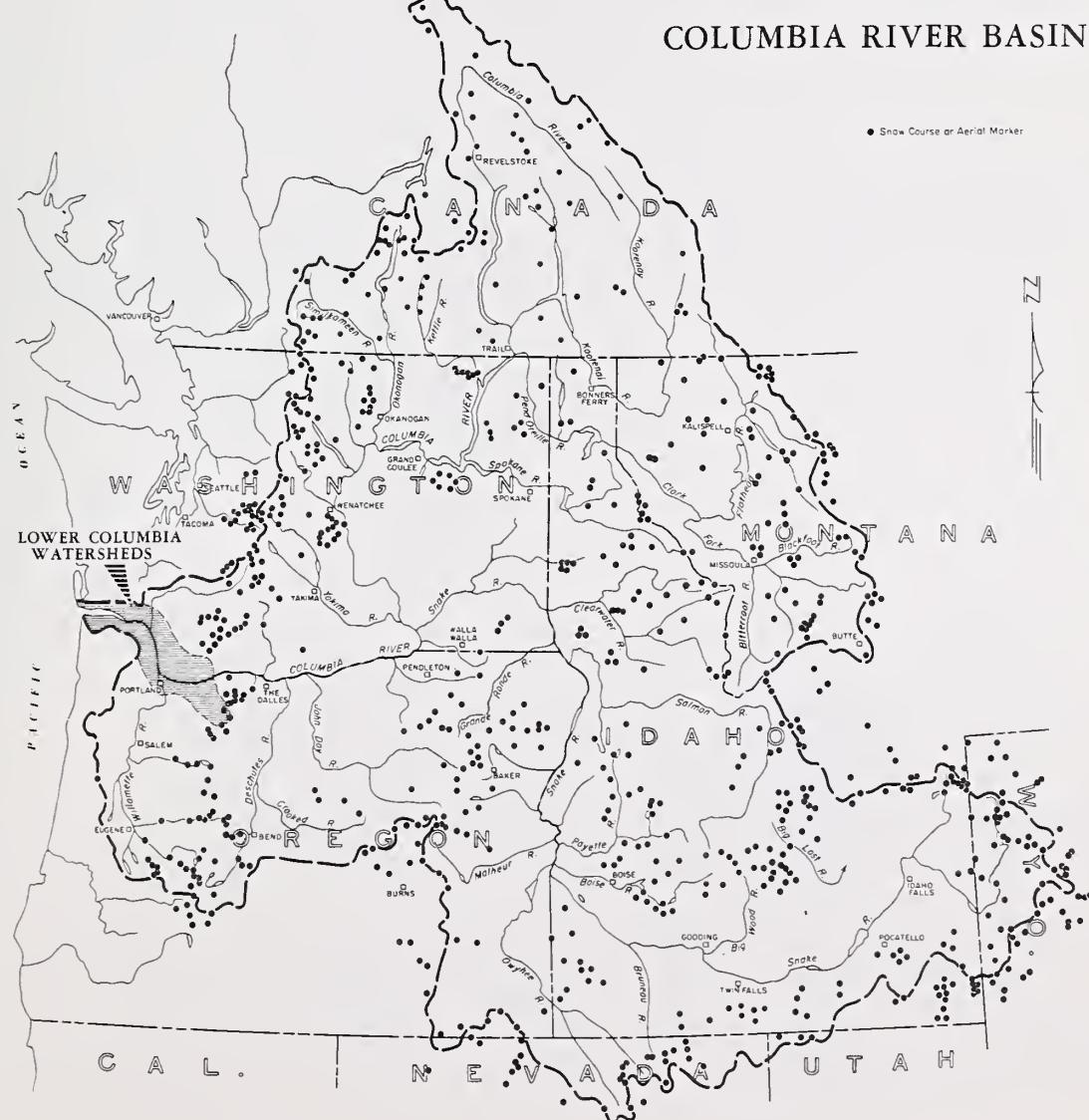
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OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

OREGON STREAMS FLOWING INTO THE LOWER COLUMBIA WILL PROVIDE AVERAGE WATER SUPPLIES NEXT SUMMER. STREAMFLOW IN THE UPPER COLUMBIA BASIN WILL BE BELOW AVERAGE, EXCEPT ALONG THE SNAKE RIVER WHERE THERE IS AN EXCELLENT SNOWPACK. A BELOW AVERAGE SNOWPACK EXISTS IN THE CANADIAN PORTION OF THE BASIN. HERE PRECIPITATION DURING THE NOVEMBER-JANUARY PERIOD HAS ONLY BEEN 81 PER CENT OF AVERAGE COMPARED TO 130 PER CENT IN OREGON.

COLUMBIA RIVER BASIN



Report prepared by

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1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Sandy River	2	48	96

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
Columbia at The Dalles ^d	63,000 94,000	87 89	April-June April-Sept.	^b ^b	72,406 105,176

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW ^d (1,000 A.F.)			PEAK (1,000 cfs)	DATE
	APR.— SEPT.	APR.— JUNE	MAY— JUNE		
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.



WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

FEBRUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

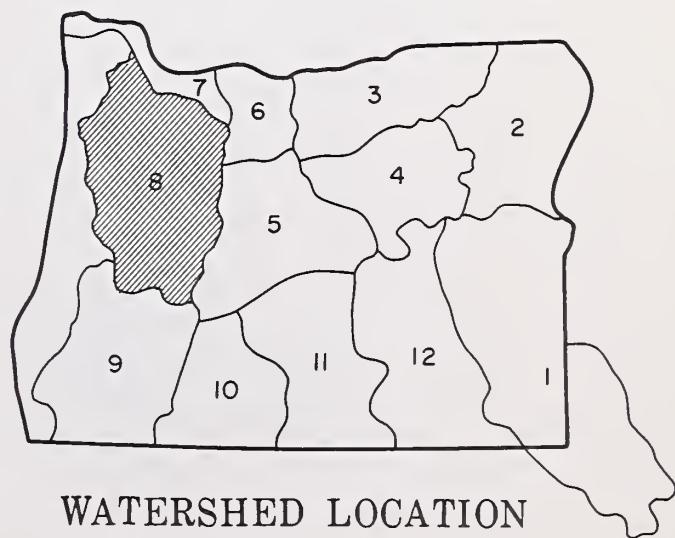
GENERAL OUTLOOK

AVERAGE WATER SUPPLIES ARE THE PROSPECT FOR THE WILLAMETTE WATERSHEDS. THE MOUNTAIN SNOWPACK IS ABOUT 75 PER CENT OF NORMAL ON MOST OF THE WATERSHED, WITH THE EXCEPTION OF THE ROW RIVER DRAINAGE, WHICH IS 50 PER CENT OF AVERAGE. PRECIPITATION FOR THE MONTH OF JANUARY WAS 174 PER CENT OF AVERAGE. THE ABOVE AVERAGE PRECIPITATION AND ABOVE NORMAL TEMPERATURES PRODUCED HEAVY RUNOFF FROM LOWER ELEVATION WATERSHEDS DURING JANUARY. MOUNTAIN SOILS ARE SATURATED. FLOOD CONTROL RESERVOIRS, NORMALLY HELD AT LOW LEVELS AT THIS TIME OF YEAR, ARE HOLDING MUCH MORE THAN NORMAL AMOUNTS OF WATER.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Calapooya	Average	Average
Clackamas	Average	Average
McKenzie	Average	Average
Molalla	Average	Average
Santiam, North	Average	Average
Santiam, South	Average	Average
Willamette, Coast Fork	Average	Average
Willamette, Middle Fork	Average	Average



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet			Last Year	Average ⁱ
Clackamas at Big Bottom	130	97	April-July	b	134
	162	98	April-Sept.	b	166
Clackamas at Estacada	627	91	April-July	b	689
	740	92	April-Sept.	b	800
Clackamas above Three Lynx	490	95	April-July		517
	585	96	April-Sept.		610
McKenzie at McKenzie Bridge	438	94	April-July		465
	572	93	April-Sept.		614
McKenzie near Vida	1000	92	April-July		1087
	1189	90	April-Sept.		1321
Oak Grove Fork above Power Intake	125	100	April-July		125
	163	100	April-Sept.		163
Row near Dorena	85	80	April-July		106
	90	82	April-Sept.		110
Santiam, North at Mehama ^d	657	82	April-July		800
	739	82	April-Sept.		901
Santiam, South at Waterloo	525	88	April-July	b	596
	550	88	April-Sept.	b	633
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge	680	94	April-July	855	725
	774	93	April-Sept.	968	828
Willamette at Salem ^d	4075	87	April-July	b	4696
	4575	88	April-Sept.	b	5199

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Clackamas River	2	28	78
McKenzie River	3	34	72
Santiam River	4	35	70
Row River	2	-	50
Willamette, Mid. Fk.	4	53	78

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Cottage Grove	30.0*	19.7	0.0	2.5
Cougar	155.2*	95.3	0.0	--
Detroit	299.9*	245.9	0.0	41.9
Dorena	70.5*	62.2	0.0	9.6
Fall Creek	115.0*	75.6	0.0	--
Fern Ridge	94.2*	86.1	0.7	20.8
Foster	30.0*	2.7	0.9	--
Green Peter	270.0*	181.1	0.0	--
Hills Creek	200.0*	138.3	0.0	178.4 ^m
Lookout Point	337.2*	250.0	0.0	47.1 ^m
Timothy Lake	61.7	48.9	51.6	45.5 ^m

*Multiple purpose
reservoir--space
reserved primarily
for flood runoff.

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as of
FEBRUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

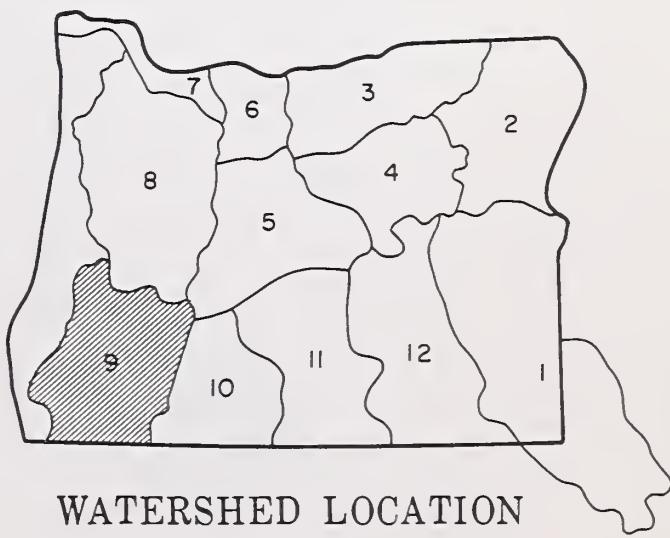
GENERAL OUTLOOK

AVERAGE SPRING AND SUMMER WATER SUPPLIES ARE IN PROSPECT FOR THE WATER USERS WITHOUT STORED WATER. PRECIPITATION DURING JANUARY WAS 177 PER CENT OF NORMAL. THE MOUNTAIN SNOWPACK IS 77 PER CENT OF AVERAGE ON THE UPPER ROGUE BASIN AND ABOUT 50 PER CENT OF AVERAGE ON OTHER STREAM BASINS. ABOVE SEASONAL TEMPERATURES AND RAIN CAUSED HEAVY RUNOFF FROM LOWER ELEVATION WATERSHEDS. WATERSHED SOILS ARE AT FIELD CAPACITY. RESERVOIRS HOLD ABOVE NORMAL AMOUNTS OF WATER FOR THIS DATE.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Althouse Creek	Average	Fair
Applegate River, Big	Average	Average
Applegate River, Little	Average	Average
Ashland Creek	Average	Average
Butte Creek, Big	Average	Fair
Butte Creek, Little	Average	Fair
Cow Creek	Average	Fair
Deer Creek	Average	Fair
Elk Creek	Average	Fair
Emigrant Creek (abv. Res.)	Average	Fair
Evans Creek	Average	Fair
Gold Hill Irrigation Dist.	Average	Average
Grants Pass Irrig. Dist.	Average	Average
Grave Creek	Average	Fair
Illinois River, East Fork	Average	Fair
Illinois River, West Fork	Average	Fair
Jump-off-Joe Creek	Average	Fair
Neil Creek	Average	Average
Red Blanket Creek	Average	Average
Rogue River	Average	Average
Sucker Creek	Average	Fair
Table Rock Irrig. Dist.	Average	Average
Thompson Creek	Average	Average
Wagner Creek	Average	Average
Williams Creek	Average	Average



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Applegate near Copper	129	92	April-Sept.	b	140
Clearwater above Trap Creek ^d	61	84	April-Sept.	b	73
Fourmile Lake net Inflow ^d	5.0	122	April-Sept.	b	4.1
	5.8	111	Feb.-Sept.		5.2
Hyatt Reservoir net Inflow ^d	4.8	92	April-Sept.		5.2
Illinois River near Kerby	271	83	March-July		325
	170	80	April-Sept.		211
Little Butte, N. Fk. at Fish Lake nr. Lake Cr. ^d	12.0	83	April-Sept.		14.4
Little Butte, S. Fk. near Lake Creek	27	82	April-July		33
Rogue above Prospect	265	99	April-July		269
Rogue, South Fork near Prospect ^d	61	98	April-July		62
	75	101	April-Sept.		74
Rogue below South Fork	575	101	April-July	b	570
	710	101	April-Sept.	b	708
Rogue at Raygold near Central Point	693	89	April-July	853	781
	827	88	April-Sept.	1003	941
Rogue at Grants Pass	820	87	April-Sept.	b	940
Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d	167	95	April-Sept.	b	176

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Rogue at Raygold	1200	Aug. 5	Aug. 7
Little Butte Creek, South Fork	100	May 20	May 27

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Emigrant Lake	39.0	30.9	22.9	22.4*
Fish Lake	7.8	5.7	3.2	5.5
Fourmile Lake	16.1	10.9	--	9.6
Howard Prairie	60.0	51.4	21.2	32.4
Hyatt Prairie	16.1	13.7	8.4	9.8

*Average for years of record after reconstruction.

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Applegate	3	49	99
Bear Creek	1	9	25
Butte Creek	4	25	53
Illinois	3	18	53
North Umpqua	3	33	44
Rogue River	6	50	77

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of

FEBRUARY 1, 1970

**U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

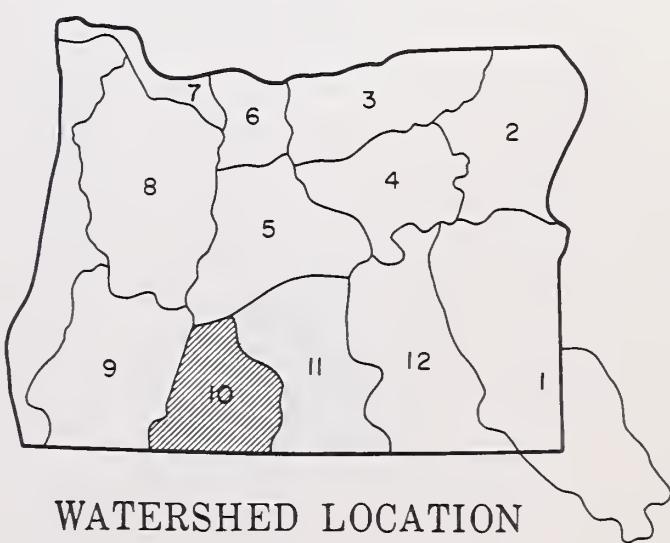
GENERAL OUTLOOK

AVERAGE WATER SUPPLIES ARE IN PROSPECT FOR THE KLAMATH WATERSHEDS. PRECIPITATION WAS 216 PER CENT OF AVERAGE DURING JANUARY. THE HEAVY RAINFALL PLUS WARM TEMPERATURES REDUCED THE MOUNTAIN SNOWPACK TO ABOUT 55 PER CENT OF NORMAL AND PRODUCED MUCH ABOVE AVERAGE RUNOFF DURING JANUARY. WATERSHED SOILS ARE SATURATED. RESERVOIRS IN THE AREA ARE FILLED TO NEAR CAPACITY.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Ft. Klamath Valley	Excellent	Average
Lost River (Clear Lake)	Excellent	Average
Lost River (Gerber)	Excellent	Excellent
Lost River (Willow Res.)	Excellent	Average
Sprague River	Average	Average
Upper Klamath Lake	Excellent	Average
Williamson River	Average	Average



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ⁱ
Clear Lake Reservoir Inflow ^k	74	85	Feb.-June	b	87
Gerber Reservoir Inflow ^k	37	86	Feb.-June	b	43
Sprague near Chiloquin	360	89	Feb.-Sept.	b	403
	250	84	April-Sept.	b	296
Upper Klamath Lake net Inflow ^k	827	88	Feb.-Sept.	919	940
	483	84	April-Sept.	656	575
Williamson below Sprague River	578	85	Feb.-Sept.	b	680
	418	88	April-Sept.	b	475

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ⁱ
Upper Klamath	2	129	119

RESERVOIR STORAGE (Thousand Ac. Ft.)

END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ⁱ
Clear Lake	440.2	336.6	177.2	206.7
Gerber	94.0	81.6	26.1	39.2
Upper Klamath Lake	584.0	503.0	405.3	360.9

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ⁱ
Lost River	4	63	88
Sprague River	3	28	52
Upper Klamath River	7	34	55
Williamson River	3	46	64

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.



WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of

FEBRUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

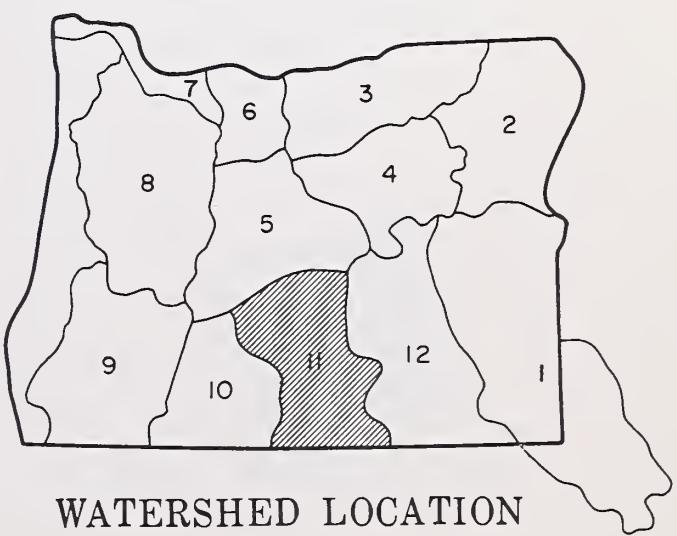
AVERAGE TO FAIR WATER SUPPLIES ARE IN PROSPECT FOR THIS AREA. WARM TEMPERATURES AND PRECIPITATION THAT WAS 219 PER CENT OF NORMAL PRODUCED HEAVY RUNOFF DURING JANUARY AND REDUCED THE MOUNTAIN SNOWPACK TO ABOUT 60 PER CENT OF NORMAL IN MOST OF THE AREA. UPPER WATERSHEDS ON THE WEST SIDE AT WARNER VALLEY HAVE AN AVERAGE SNOWPACK WHICH WILL PROVIDE GOOD WATER SUPPLIES THROUGH THE SEASON. MOUNTAIN SOILS ARE SATURATED.

COTTONWOOD RESERVOIR IS NEARLY FULL AND GERBER RESERVOIR IS FULL AND SPILLING.

WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Chewaucan	Average	Fair
Crooked Creek	Average	Fair
Deep Creek	Excellent	Average
Dry Creek	Average	Fair
East Side Goose Lake	Excellent	Average
Guano Lake	Average	Average
Honey Creek	Excellent	Average
Lakeview Water Users Assn.	Excellent	Excellent
Rock Creek (Hart Mtn.)	Average	Fair
Silver-Buck Creeks	Average	Fair
Summer Lake	Average	Average
Thomas Creek	Average	Fair
Twenty-mile Creek	Excellent	Average
Warner Lakes	Excellent	Average



WATERSHED LOCATION

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		FORECAST PERIOD	PAST RECORD			
	FORECAST			Last Year	THOUSAND ACRE FEET		
	Thousand Acre Feet	Percent of Average			Average i		
Donner und Blitzen near Frenchglen	71	131	March-July	b	54		
	69	125	April-Sept.	b	55		
Silver near Riley	30	167	April-July	b	17.9		
Silvies River near Burns	166	164	March-July	b	101		
	140	169	April-Sept.	b	83		
Trout Creek near Denio	7.2	94	March-July	b	7.7		

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:		RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average m			Last Year	Average i
Silvies River, Silver Cr.	3	99	106	Donner und Blitzen R. Silver Creek Silvies River Trout Creek	4 3 4 3	71 94 110 37	134 136 155 112

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BASIC DATA SUPPLEMENT 1

FEBRUARY 1, 1970

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave.i
OWYHEE, MALHEUR WATERSHEDS					
Antelope Ridge	2/3	22	6.6	12.4	3.4 ^h
Battle Creek ^e (Ida.)	1/29	9	2.5	5.0	2.8 ^m
Bear Creek (Nev.)	1/29	48	15.2	19.4	11.3 ^h
Big Bend (Nev.)	1/28	30	7.0	7.9	5.3
Blue Mountain Springs	1/28	65	18.5	15.0	10.4
Buck Pasture ^e	1/29	0	0.0	1.5	1.6 ^m
Buckskin, Lower (Nev.)	c				
Buckskin, Upper (Nev.)	c				
Bull Basin ^e (Ida.)	1/29	6	1.8	2.6	0.9 ^m
Bully Creek ^e	1/29	12	3.2	3.2	2.3 ^m
Call Meadow ^e	1/29	24	6.5	5.7	2.1 ^m
Columbia Basin ^e (Nev.)	1/26	32	8.3	10.4	--
Cottonwood-Indian ^e	1/29	0	0.0	2.1	1.0 ^m
Crane Prairie	c				
Crow Camp ^e	1/29	T	T	4.7	1.2 ^m
Disaster Peak (Nev.)	c				
Eldorado Pass	1/29	12	3.8	4.2	2.5 ^h
Fawn Creek ^e (Nev.)	1/29	16	4.2	4.5	--
Fish Creek ^e	1/29	74	22.2	20.1	14.4 ^h
Flag Prairie ^e	1/29	20	5.4	8.3	2.5 ^m
Fox Creek (Nev.)					
Fry Canyon (Nev.)	1/29	22	5.4	7.9	4.7
Gold Creek (Nev.)	1/28	20	4.4	4.7	3.6
Granite Peak (Nev.)	1/28	47	17.2	18.7	8.3 ^h
Hyde Pasture ^e (Ida.)	1/29	10	2.8	9.8	3.8 ^m
Jack Creek, Lower (Nev.)	c				
Jack Creek, Upper (Nev.)	1/29	20	5.2	5.6	5.1 ^h
Jack Peak (Nev.)	c				
Lake Creek R. S.	1/28	40	11.8	8.8	7.0 ^h
Laurel Draw (Nev.)	1/28	20	6.1	7.5	4.8 ^h
Logan Valley ^e	1/29	28	7.0	6.7	5.1 ^m
Lookout Butte ^e	1/29	0	0.0	1.8	0.1 ^m
Louse Canyon ^e	1/29	6	1.8	6.7	2.0 ^m
Martin Creek (Nev.)	1/28	25	8.3	16.2	5.7 ^h
Merritt Mountain ^e (Nev.)	1/29	18	5.9	7.0	--
Midas ^e (Nev.)	1/29	4	1.4	9.0	--
Mud Flat (Ida.)	2/3	22	6.2	--	3.4 ^h
Oregon Canyon ^e	1/29	12	3.4	10.6	3.2 ^m
Quinn Ridge ^e (Nev.)	1/29	T	T	3.4	1.5 ^m
Red Canyon ^e (Ida.)	1/29	35	11.2	10.6	4.2 ^m
Rock Spring	1/29	16	5.1	4.9	3.8
Rodeo Flat (Nev.)	1/29	16	3.7	5.7	4.2
76 Creek (Nev.)	1/29	42	13.9	14.3	6.1 ^h
Silver City (Ida.)	2/2	45	15.4	--	9.2 ^h
Silvies ^e	1/29	28	7.8	10.6	--
South Mountain (Ida.)	1/30	35	11.4	18.2	6.6
Stag Mountain ^e (Nev.)	1/29	17	5.6	--	--
Stinking Water	1/30	T	T	5.8	2.6 ^h
Succor Creek (Ida.)	1/29	12	3.2	4.8	4.4 ^m
Taylor Canyon (Nev.)	1/29	13	3.4	6.1	3.6 ^h
Toe Jam ^e (Nev.)	1/29	26	9.1	12.2	--
Tremewan Ranch (Nev.)	1/28	T	T	2.4	1.2 ^h
Triangle ^e (Ida.)	1/29	0	0.0	2.6	0.8 ^m
Trout Creek	1/29	18	5.0	10.6	3.7 ^m
"V" Lake ^e	1/29	12	3.4	10.6	2.5 ^m
Vaught Ranch ^e (Ida.)	1/29	8	2.2	5.9	--
War Eagle ^e (Ida.)	1/29	84	28.5	--	--

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave.i
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS					
Aneroid Lake #1	2/1	87	23.9	32.8	24.0
Aneroid Lake #2	2/1	71	22.1	29.8	21.6
Anthony Lake	1/30	68	21.8	18.0	16.4
Bald Mountain ^e (Ore.)	1/29	56	16.8	15.7	16.7 ^m
Beaver Reservoir	1/26	19	5.2	9.3	6.7
Big Sheep ^e	1/29	60	18.0	25.2	18.0
Blue Mtn. Summit	1/29	21	7.2	8.4	5.6
Bourne	1/28	59	14.8	13.2	10.3
County Line	1/30	7	1.9	4.1	4.1
Dooley Mountain	1/26	24	7.4	7.2	5.6
Eilertson Meadows	1/27	36	9.4	12.5	7.6
Eldorado Pass	1/29	12	3.8	4.2	2.5 ^h
Gold Center	1/28	47	12.6	11.5	8.2
Goodrich Lake	2/4	111	33.0	--	23.7 ^h
Intake House	1/27	38	10.0	11.3	--
Little Alps	1/30	36	10.5	11.2	7.9 ^h
Little Antone	1/30	26	7.8	6.6	--
Lucky Strike	1/28	28	8.2	--	8.0 ^h
Meacham	1/27	11	2.9	8.1	6.3
Mirror Lake ^e	1/29	178	53.4	47.5	44.7 ^m
Moss Springs	2/1	49	15.0	15.0	14.7
Power Plant	1/27	19	6.0	6.5	--
Schneider Meadows	1/28	96	29.3	26.2	19.4
Schoolmarm	1/30	4	1.3	3.6	3.6
Standley ^e	1/29	101	30.3	22.0	17.2 ^m
Taylor Green	1/31	44	13.2	10.8	--
Tipton	1/28	37	10.3	7.8	6.9
Tollgate	1/27	68	20.4	22.0	15.9
TV Ridge ^e	1/29	52	15.6	15.0	--

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

Arbuckle Mountain	1/29	25	7.8	10.6	7.2
Battle Mountain Summit	1/27	0	0.0	2.4	1.8 ^m
Blue Mtn. Camp	1/27	30	10.8	15.8	10.6 ^h
Emigrant Springs	1/27	8	1.6	8.1	4.2
Lucky Strike	1/28	28	8.2	--	8.0 ^h
Meacham	1/27	11	2.9	8.1	6.3
Tollgate	1/27	68	20.4	22.0	15.9
Walla Walla Diversion	1/30	0	0.0	8.6	2.0
Weston Mountain	1/27	0	0.0	1.4	1.0

UPPER JOHN DAY WATERSHEDS

Anthony Lake	1/30	68	21.8	18.0	16.4
Arbuckle Mountain	1/29	25	7.8	10.6	7.2
Battle Mountain Summit	1/27	0	0.0	2.4	1.8 ^m
Beech Creek Summit	1/29	8	1.9	5.6	3.7 ^h
Blue Mountain Springs	1/28	65	18.5	15.0	10.4
Blue Mountain Summit	1/29	27	7.2	8.4	5.6
Derr	1/30	31	10.2	9.4	6.6
East Fork Canyon ^e	b			--	--
Gold Center	1/28	47	12.6	11.5	8.2
Indian Creek Butte ^e	b			--	--
Izee Summit	1/29	26	7.7	6.3	5.4
Lucky Strike	1/28	28	8.2	--	8.0 ^h
Marks Creek	1/27	7	1.2	4.3	3.1
Ochoco Meadows	1/30	23	7.2	8.3	6.6
Olive Lake	b			15.9	12.2
Schoolmarm	1/30	4	1.3	3.6	3.6
Snow Mountain	1/28	45	12.4	10.5	8.6 ^h
Starr Ridge	1/29	18	5.5	7.0	4.1 ^h
Tipton	1/29	37	10.3	7.8	6.9
Williams Ranch	1/28	0	0.0	--	0.9

BASIC DATA SUPPLEMENT 1

FEBRUARY 1, 1970

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.

UPPER DESCHUTES, CROOKED WATERSHEDS

Black Pine Spring	1/30	8	1.8	8.1	3.0 ^h
Caldwell Ranch	1/29	19	5.8	13.3	8.4 ^h
Cascade Summit	1/29	51	14.5	27.0	19.1
Chemult	2/2	21	7.0	12.5	8.4
Deer Creek	1/29	37	10.8	19.6	--
Derr	1/30	31	10.2	9.4	6.6
Hogg Pass	1/30	70	24.8	42.7	25.6
Hungry Flat	1/31	11	2.6	7.7	5.1
Irish-Taylor	1/29	64	21.1	35.9	23.3
Marks Creek	1/27	7	1.2	4.3	3.1
Mowich	1/28	10	2.1	5.5	4.2 ^h
New Crescent Lake	1/28	33	8.5	14.7	10.5
New Dutchman Flat #2	1/31	94	33.6	37.1	31.8
Ochoco Meadows	1/30	23	7.2	8.3	6.6
Snow Mountain	1/28	45	12.4	10.5	8.6 ^h
Tamarack	1/27	18	4.7	4.5	4.3 ^h
Tangent	1/31	60	17.8	19.1	15.4
Three Creek Butte	1/30	22	5.7	14.1	8.0 ^h
Three Creek Meadow	1/30	36	10.9	18.2	12.3
Waldo Lake	1/27	46	14.4	26.4	19.7
Willamette Pass	1/28	86	28.9	--	26.2
Windigo Pass (DISCONTINUED)					

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

Brooks Meadows	c				
Clear Lake	1/30	23	6.4	19.6	5.9 ^h
Clear Lake (Experimental)	1/30	36	9.6	23.3	9.8 ^h
Cooper Spur	2/2	34	6.4	25.0	7.5 ^h
Cooper Spur (Alternate)	2/2	38	11.8	29.3	--
Greenpoint Reservoir	1/29	49	14.2	28.6	9.7
Knebal Springs	c				
Parkdale	2/2	8	2.6	10.8	0.8 ^m
Phlox Point	1/30	104	34.4	64.5	35.8
Red Hill	1/24	42	16.7	48.1	23.1
Still Creek	1/30	42	13.4	33.3	13.8
Switchback	2/2	39	13.7	30.4	9.9 ^m
Tilly Jane	1/25	84	25.2	37.6	24.0
Ulrich Ranch Junction	c				
Umbrella Falls	2/1	138	46.0	59.0	--
Upper Valley	2/2	23	8.5	21.8	2.7 ^h

WILLAMETTE WATERSHEDS

Cascade Summit	1/29	51	14.5	27.0	19.1
Champion	1/30	38	10.0	--	16.4
Clackamas Lake	c				
Clear Lake	1/30	23	6.4	19.6	5.9 ^h
Clear Lake (Experimental)	1/30	36	9.6	23.3	9.8 ^h
Dead Horse Grade	2/2	18	4.2	25.7	10.7
Detroit (City)	1/30	0	0.0	9.7	1.4
Detroit Dam	1/30	0	0.0	9.5	0.3
Golden Curry Creek	1/30	0	0.0	--	3.7
Hogg Pass	1/30	70	24.8	42.7	25.6
Laurel Mtn. (New Course)	1/29	6	1.1	--	--
Layng Creek	1/30	0	0.0	3.4	T
Lost Creek Ranch	2/2	0	0.0	14.9	2.8
Lund Park	1/30	0	0.0	--	0.4
Marion Forks	1/30	9	1.6	18.0	8.2 ^h
Mary's Peak	1/29	9	2.8	30.4	4.0 ^m
Mary's Peak (Alt. - New)	1/29	7	2.2	--	--
McCredie Springs	1/29	0	0.0	5.0	0.2

(Continued)

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.

WILLAMETTE WATERSHEDS (Continued)

McKenzie	2/2	77	24.8	44.4	27.6
McKenzie Bridge	2/2	0	0.0	10.3	0.3
Meridian Dam	1/29	0	0.0	3.7	0.0
Mill City	1/30	0	0.0	7.8	T
Oakridge	1/29	0	0.0	2.9	T
Peavine Ridge	1/29	26	6.6	27.2 ^g	10.7 ^h
Phlox Point	1/30	104	34.4	64.5	35.8
Railroad Overpass	1/29	2	0.2	6.6	2.1
Salt Creek Falls	1/29	12	2.2	18.7	10.0
Santiam Junction	1/30	35	9.3	28.1	14.8
Still Creek	1/30	42	13.4	33.3	13.8
Valsetz Summit (New Course)	1/29	1	0.1	--	--
Vida	2/2	0	0.0	7.3	T
Waldo Lake	1/27	46	14.4	26.4	19.7
Weaver Creek	1/30	0	0.0	--	1.0
White Branch Slide	2/2	7	1.5	19.0	4.0
Whitewater Bridge	1/30	4	0.7	14.7	3.7
Willamette Pass	1/28	86	28.9	--	26.2

ROGUE, UMPQUA WATERSHEDS

Althouse	1/29	2	0.4	29.4	5.0
Annie Spring	2/2	103	33.3	40.5	27.8 ^m
Beaver Dam Creek	1/30	15	3.3	20.8	8.1
Big Red Mountain	1/29	69	23.5	35.8	19.8
Billie Creek Divide	1/30	38	10.6	24.2	14.2 ^h
Caliban	1/29	86	29.8	35.3	--
Champion	1/30	38	10.0	--	16.4
Cold Springs Camp	1/23	50	17.6	35.4	21.9 ^h
Deadwood Junction	1/30	8	1.7	16.3	6.3 ^h
Diamond-Crater Summit	1/22	42	18.4	28.5	22.7 ^h
Diamond-Crater Sum. (Alt.)	1/22	44	16.3	--	--
Diamond Lake	1/22	22	8.8	17.2	14.6
Fish Lake	1/30	15	4.6	20.3	9.8 ^m
Fourmile Lake	c				
Grayback Peak	1/27	32	14.1	41.6	18.6
Howard Prairie	1/30	7	1.0	15.0	6.4 ^h
Hyatt Prairie Reservoir	1/30	9	1.3	15.3	5.9 ^h
King Mountain #1	1/29	11	1.9	--	--
King Mountain #2	1/29	8	1.0	--	--
King Mountain #3	1/29	3	0.3	--	--
King Mountain #4	1/28	0	0.0	--	--
King Mountain #5	1/28	0	0.0	--	--
King Mountain #6	1/28	0	0.0	--	--
Little Red Mountain	1/28	56	15.4	31.6	15.2 ^h
Mt. Ashland Switchback	1/29	91	26.5	38.0	--
North Umpqua	1/29	15	4.2	14.5	10.4
Page Mountain	1/29	1	0.1	17.3	3.9 ^h
Park Headquarters	2/2	130	44.7	50.3	36.5
Red Butte #1	1/26	10	2.0	18.5	9.9 ^h
Red Butte #2	1/26	5	1.0	11.4	6.7 ^h
Red Butte #3	1/26	0	0.0	6.9	4.1 ^h
Red Butte #4	1/26	0	0.0	4.7	2.9 ^h
Red Butte #5	1/26	0	0.0	3.2	0.6 ^m
Red Butte #6	1/26	0	0.0	0.3	0.0 ^m
Seven Lakes #1 (DISCONTINUED)					
Seven Lakes #2	1/29	76	29.2	38.2	25.8 ^h
Seven Mile (New Course)	1/28	64	19.7	--	--
Silver Burn	1/30	8	1.0	19.4	9.8
Siskiyou Summit	1/28	9	1.6	18.2	6.6
Siskiyou Sum. (Alt. #2)	1/28	9	1.8	--	--
Ski Bowl Road	1/30	71	22.3	33.0	--
South Fork Canal	1/31	1	0.2	7.0	2.8
Trap Creek	1/29	8	2.0	14.3	8.6 ^h
Whaleback	1/30	52	16.1	30.4	21.7 ^h
Windigo Pass (DISCONTINUED)					

BASIC DATA SUPPLEMENT 1

FEBRUARY 1 1970

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR		PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)
		Last Yr.	Ave.i	

KLAMATH WATERSHEDS

Annie Spring	2/2	103	33.3	40.5	27.8	m
Beatty (PP&L)	1/30	0	0.0	1.8	0.6	m
Billie Creek Divide	1/30	38	10.6	24.2	14.2	h
Bly Mountain	1/21	3	0.9	10.1	5.0	h
Bly 101 Ranch (PP&L)	1/30	0	0.0	4.2	1.7	
Chemult	2/2	21	7.0	12.5	8.4	
Chiloquin (PP&L)	b			5.8	1.7	
Cold Springs Camp	1/23	50	17.6	35.4	21.9	h
Crazyman Flat ^e	1/28	24	7.0	16.2	6.5	m
Crowder Flat ^e (Calif.)	1/28	8	1.8	7.5	3.0	m
Crystal (PP&L)	1/28	7	1.8	15.8	7.1	
Diamond-Crater Summit	1/22	42	18.4	28.5	22.7	h
Diamond-Crater Sum. (Alt.)	1/22	44	16.3	- -	- -	
Diamond Lake Junction (97)	1/22	5	1.4	7.8	4.7	h
Dog Hollow ^e	1/28	1	0.2	3.9	1.2	m
Finley Corrals ^e	1/28	38	11.0	20.7	10.4	m
Fort Klamath (PP&L)	1/28	3	0.2	7.6	3.8	
Fourmile Lake	c			- -	17.0	h
Gerber	1/30	0	0.0	6.4	2.3	
Harriman (PP&L)	1/31	6	1.5	10.8	3.6	
Hyatt Prairie Reservoir	1/30	9	1.3	15.3	5.9	h
Kirk (PP&L)	b			7.8	5.8	m
Lake of the Woods	1/28	14	2.5	14.5	8.4	h
Park Headquarters	2/2	130	44.7	50.3	36.5	
Pelican Guard Station	1/22	0	0.0	7.4	3.0	h
Quartz Mountain	1/29	6	1.8	10.8	5.4	
Quartz Mtn. (Extension)	1/29	6	1.6	11.6	- -	
Quartz Mountain (PP&L)	1/29	17	4.9	12.0	5.4	
Seven Lks. #1 (DISCONTINUED)						
Seven Lakes #2	1/29	76	29.2	38.2	25.8	h
Seven Mile (New Course)	1/28	64	19.7	- -	- -	
State Line ^e (Calif.)	1/28	18	5.2	13.4	6.5	m
Strawberry	1/20	20	4.6	12.6	5.4	h
Summer Rim ^e	1/28	24	7.0	16.5	9.8	m
Sun Mountain	1/26	44	13.8	22.7	16.7	h
Sycan Flat ^e	1/28	12	3.5	12.3	5.7	m
Taylor Butte	1/27	9	2.0	9.0	4.5	h
Yamsey (PP&L - DISCONTINUED)						

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR		PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)
		Last Yr.	Ave.i	

HARNEY BASIN WATERSHEDS

Blue Mountain Springs	1/28	65	18.5	15.0	10.4	m
Buck Pasture ^e	1/29	0	0.0	1.5	1.6	m
Buckskin Lake ^e	1/29	0	0.0	3.9	0.8	m
Call Meadows ^e	1/29	24	6.5	5.7	2.1	m
Crow Camp ^e	1/29	T	T	4.7	1.2	m
Delintment Lake	1/28	31	8.2	7.3	5.1	h
Denio Creek ^e	1/29	0	0.0	1.7	0.6	m
Disaster Peak (Nev.) ^c						
Emigrant Butte	1/28	16	3.8	4.5	2.8	h
Fish Creek	1/29	74	22.2	20.1	14.4	h
Hart Mountain ^e	1/28	5	1.1	2.4	1.0	m
Idlewild Camp	1/29	18	5.2	5.6	3.7	
Izee Summit	1/29	26	7.7	6.3	5.4	
Lake Creek R. S.	1/28	40	11.8	8.8	7.0	h
Lake Creek (New Tangent)	1/28	39	11.2	9.8	- -	
Oregon Canyon ^e	1/29	12	3.4	10.6	3.2	
Rock Spring	1/29	16	5.1	4.9	3.8	
Silvies ^e	1/29	28	7.8	10.6	- -	
Snow Mountain	1/28	45	12.4	10.5	8.6	h
Starr Ridge	1/29	18	5.5	7.0	4.1	h
Stinking Water	1/30	T	T	5.8	2.6	h
Trout Creek ^e	1/29	18	5.0	10.6	3.7	m
"V" Lake ^e	1/29	12	3.4	10.6	2.5	

LAKE COUNTY, GOOSE LAKE WATERSHEDS

Adin Mountain (Calif.)	1/30	26	9.4	20.4	7.5	
Bald Mountain (Nev.) ^c						
Bear Flat Meadow ^e	1/28	26	7.5	13.4	5.8	m
Camas Creek	1/30	21	6.1	14.0	7.3	
Cedar Pass (Calif.)	2/3	38	12.6	17.8	9.5	
Colvin Creek ^e	1/28	10	2.2	8.9	- -	
Cox Flat ^e	1/30	5	1.1	10.3	5.3	m
Crowder Flat ^e (Calif.)	1/28	8	1.8	7.5	3.0	m
Dismal Swamp ^e (Calif.)	1/28	38	11.0	16.2	9.1	m
Finley Corrals ^e	1/28	38	11.0	20.7	10.4	m
Hart Mountain ^e	1/28	5	1.1	2.4	1.0	m
Little Bally Mtn. ^e (Nev.)	1/28	6	1.3	4.1	1.9	m
Patton Meadows ^e	1/28	51	14.8	20.1	10.8	m
Quartz Mountain (PP&L)	1/29	17	4.9	12.0	5.4	
Quartz Mountain	1/29	6	1.8	10.8	5.4	
Quartz Mountain (Ext.)	1/29	6	1.6	11.6	- -	
Sherman Valley ^e	1/28	30	8.7	13.8	6.9	m
Silver Creek	1/30	3	1.0	5.5	2.9	
State Line ^e (Calif.)	1/28	38	11.0	13.4	6.5	m
Strawberry	1/30	20	4.6	12.6	5.4	
Summer Rim ^e	1/28	24	7.0	16.5	9.8	m
Sycan Flat ^e	1/28	12	3.5	12.3	5.7	m
Willow Creek ^e	1/28	4	1.0	5.9	2.9	m

BASIC DATA SUPPLEMENT 2

FEBRUARY 1, 1970

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average m
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8	c		--	--
Big Bend (Nev.)	6700	48	16.7	1/28	12.0	16.2	15.6
Blue Mountain Spring	5900	42	16.9	1/28	9.7	10.6	9.2
Crane Prairie	5375	48	18.2	c		--	15.0
Folly Farm	4450	30	12.5	c		--	--
Jack Creek, Lower (Nev.)	6800	48	8.6	c		--	--
Jordan Valley	4390	48	19.3	1/30	14.0	15.8	--
Mud Flat (Ida.)	5500	48	12.8	2/3	14.4	--	9.9
Rodeo Flat (Nev.)	6800	42	11.0	1/29	7.6	11.0	10.7
Stinking Water Summit (DISCONTINUED)							
Taylor Canyon (Nev.)	6200	48	15.1	1/29	9.4	13.0	13.4
Triangle (Ida.)	5150	48	16.6	c		--	--
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	1/29	10.1	11.1	9.9
Dooley Mountain	5430	36	9.2	1/26	6.6	3.3	3.4
Emigrant Springs	3925	48	22.3	1/27	22.0	20.9	18.3
Ladd Summit	3730	48	18.9	1/30	12.2	10.3	9.9
Moss Springs	5850	36	25.8	1/31	14.5	14.9	--
Tollgate	5070	48	23.6	1/27	17.6	18.0	19.7
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Athena-Weston (DISCONTINUED)							
Battle Mountain Summit	4340	48	13.8	1/27	13.8	13.7	12.3
Emigrant Springs	3925	48	22.3	1/27	22.0	20.9	18.3
Tollgate	5070	48	23.6	1/27	17.6	18.0	19.7
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	1/27	13.8	13.7	12.3
Beech Creek	4800	48	21.3	1/28	17.2	14.2	12.5
Blue Mountain Spring	5900	42	16.9	1/28	9.7	10.6	9.2
Blue Mountain Summit	5100	36	16.8	1/29	10.1	11.1	9.9
Derr	5670	24	9.0	1/30	8.7	8.9	--
Marks Creek	4540	36	14.1	1/27	13.6	11.8	10.1
Snow Mountain	6300	48	16.7	1/28	13.3	14.3	13.8
Starr Ridge	5150	36	10.6	1/29	10.5	10.5	9.1
Williams Ranch	4500	42	17.9	1/29	17.7	17.8	17.2
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0	1/30	8.7	8.9	--
Marks Creek	4540	36	14.1	1/27	13.6	11.8	10.1
Snow Mountain	6300	48	16.7	1/28	13.3	14.3	13.8
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS							
Cooper Spur	3490	72	26.4	2/2	14.1	14.2	--
KLAMATH WATERSHEDS							
Bly Mountain	5090	42	14.0	1/21	12.4	9.9	10.5
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	1/30	13.5	12.1	11.7
Quartz Mountain	5230	48	15.3	1/29	10.0	7.5	8.3

BASIC DATA SUPPLEMENT 2

FEBRUARY 1, 1970

SOIL MOISTURE

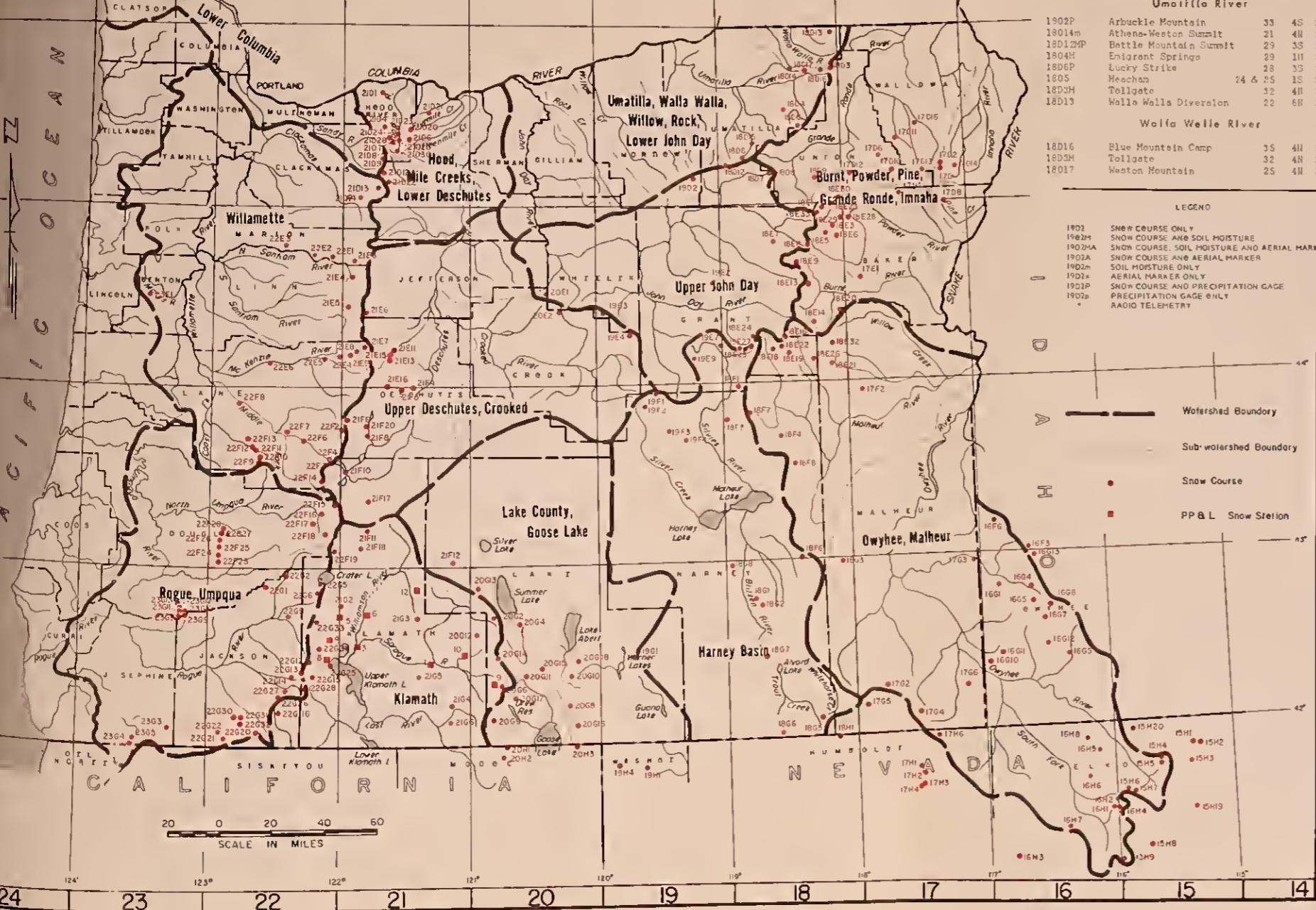
DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average ^m
HARNEY BASIN WATERSHEDS							
Blue Mountain Spring	5900	42	16.9	1/28	9.7	10.6	9.2
Fish Creek	7900	48	15.0	c	--	--	--
Folly Farm	4450	30	12.5	c	--	--	--
Silvies	6900	48	16.4	c	--	--	--
Snow Mountain	6300	48	16.7	1/28	13.3	14.3	13.8
Starr Ridge	5150	36	10.6	1/29	10.5	10.5	9.1
Stinking Water (DISCONTINUED)							
Willow-Bald	5000	24	6.6	1/28	6.5	6.2	5.6

BASIC DATA SUPPLEMENT 3

FEBRUARY 1, 1970

PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average
Allison Work Center (Harney County)	5320	10/31 to 1/28	12.55		
Aneroid Lake #2 (Wallowa County)	7400	10/25 to 1/30	14.00		
Anthony Lake (Baker County)	7150	12/29 to 1/23	7.98		
Arbuckle Mountain (Morrow County)	5400	1/2 to 1/29	8.35		
Camas Creek (Lakeview 4NE) (Lake County)	5825	12/30 to 1/30	9.25		
County Line (Umatilla County)	4800	12/17 to 1/28	7.15		
Derr G.S. (Dayville) (Wheeler County)	5800	10/28 to 1/30	18.70		
Dooley Mountain (Baker) (Baker County)	5200	12/18 to 1/18	3.00		
Fish Lake (Jackson County)	4865	January	8.30		
Granite Mountain (Grant County)	5900	12/16 to 1/17	7.50		
Marks Creek (Crook-Wheeler Cos.)	4540	12/24 to 1/27	7.85		
Park Headquarters (Klamath County)	6450	January	18.80		
Quartz Mountain Summit (Lake County)	5530	12/30 to 1/29	7.58		
Silver Creek (Silver Lake)	4900	12/31 to 1/30	5.89		
Strawberry (Lake County)	5760	10/22 to 1/30	16.90		
Taylor Butte (Klamath County)	5040	12/23 to 1/27	7.50		
Taylor Green (Medical Springs) (Union County)	5800	11/20 to 1/29	24.00		



Map and Index to OREGON SNOW COURSES



The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon State University
Oregon State Engineer and Corps of State Watermasters
Oregon State Highway Engineers
Soil and Water Conservation Districts of Oregon

COUNTY

Douglas County Water Resources Survey

FEDERAL

Department of Agriculture
Cooperative Extension Service
Forest Service
Soil Conservation Service
Department of Commerce
Weather Bureau
Department of the Interior
Bonneville Power Administration
Bureau of Land Management
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
National Park Service
Department of National Defense
Corps of Army Engineers

PUBLIC UTILITIES

Pacific Power and Light Company
Portland General Electric Company
California-Pacific Utilities Company

MUNICIPALITIES

City of Baker
City of La Grande
City of The Dalles
City of Walla Walla

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Arnold Irrigation District
Associated Ditch Companies
Burnt River Irrigation District
Central Oregon Irrigation District
East Fork Irrigation District
Grants Pass Irrigation District
Hood River Irrigation District
Jordan Valley Irrigation District
Juniper Flat Irrigation District
Lakeview Water Users, Incorporated
Medford Irrigation District
Middle Fork Irrigation District
North Board of Control - Owyhee Project
North Unit Irrigation District
Ochoco Irrigation District
Rogue River Valley Irrigation District
South Board of Control - Owyhee Project
Squaw Creek Irrigation District
Talent Irrigation District
Tumalo Project
Vale-Oregon Irrigation District
Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

The Crag Rats, Hood River, Oregon

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mining and industry

—
“The Conservation of Water begins
with the Snow Survey”